



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,076	01/28/2004	Hsu-Ping Tseng	025789-00006	9811

7590 07/26/2007  
ARENT FOX KINTNER PLOTKIN & KAHN, PLLC  
Suite 400  
1050 Connecticut Avenue, N.W.  
Washington, DC 20036-5339

EXAMINER
----------

CHIEN, LUCY P

ART UNIT	PAPER NUMBER
----------	--------------

2871

MAIL DATE	DELIVERY MODE
-----------	---------------

07/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/765,076

Applicant(s)

TSENG ET AL.

Examiner

Lucy P. Chien

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-13 is/are rejected.
- 7) ☒ Claim(s) 2,4,5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/24/2005.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 1,6,7** are rejected under 35 U.S.C. 102(b) as being anticipated by Ibamoto et al (US 4945348).

*Regarding Claim 1,*

Ibamoto et al (Figure 4 and figure 6) discloses display panel (2) comprising: a substrate (2); at least one protrusion (6) on a face of the substrate; and a light reflective layer (2, where the arrows bounce off (2) and go back towards (6)) deposited adjacent to the protrusion (6, shown better in Figure 4 as a protrusion), wherein the protrusion amplifies light reflection intensity when light is reflect off the light reflective layer (as shown in Figure 4a-4c).

*Regarding Claim 6,*

Ibamoto et al (Figure 4 and figure 6) discloses wherein the protrusion is configured to optimally amplify light reflective intensity.

*Regarding Claim 7,*

Ibamoto et al (Figure 4 and figure 6) discloses wherein the protrusion comprises at least one arcuate protrusion or at least one angular protrusion (shown in Figure 4a-4c).

Art Unit: 2871

**Claim 1,6,7** are rejected under 35 U.S.C. 102(b) as being anticipated by Minoura et al (US 5631750).

Regarding Claim 1.

Minoura et al (Figure 9) discloses display panel (122) comprising: a substrate (120,124); at least one protrusion (123) on a face of the substrate; and a light reflective layer (121) deposited adjacent to the protrusion (protruding into substrate 124), wherein the protrusion amplifies light reflection intensity when light is reflect off the light reflective layer (as shown in Fig. 9)

Regarding Claim 6.

Minoura et al (Figure 9) discloses wherein the protrusion is configured to optimally amplify light reflective intensity.

Regarding Claim 7.

Minoura et al (Figure 9) discloses wherein the protrusion comprises at least one arcuate protrusion or at least one angular protrusion.

**Claim 8,9,11-13** are rejected under 35 U.S.C. 102(b) as being anticipated by Miyagaki et al (US 20030222980).

Regarding Claim 8.

Miyagaki et al (Fig. 18) discloses forming at least one protrusion (52) on one face of a substrate [0301]; and depositing a light reflective layer (56) on the protrusion (52), wherein the protrusion amplifies light reflection intensity when light is reflect off the light

reflective layer (shown in Fig. 20).

Regarding Claim 9.

Miyagaki et al (Fig. 18) discloses depositing a transparent film (microlens 52) on the one face of the substrate [0301]; and etching the transparent film [0117] to form the protrusion on the transparent film.

Regarding Claim 11.

Miyagaki et al (Fig. 18) discloses forming the protrusion having a configuration to optimally amplify light reflective intensity.

Regarding Claim 12.

Miyagaki et al (Fig. 18) discloses forming the protrusion having an arcuate configuration or an angular configuration.

Regarding Claim 13.

Miyagaki et al (Fig. 32) discloses depositing a light shielding layer (black matrix 191a-191d) on one face of the light reflecting layer (151).

**Claim 8,10** are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuo (US 20020044241).

Regarding Claim 8.

Matsuo (Fig. 1) discloses forming at least one protrusion (the wavy shape where 12 is pointing to) on one face of a substrate 11; and depositing a light reflective layer (12) on the protrusion (wavy shape of 11), wherein the protrusion amplifies light reflection intensity when light is reflect off the light reflective layer.

Art Unit: 2871

Regarding Claim 10.

Matsuo (Fig. 1) discloses etching the substrate to form the protrusion on the one face of the substrate (11) [0009].

**Claim 1,4** are rejected under 35 U.S.C. 102(b) as being anticipated by Cummings et al (US 20020190643).

Regarding Claim 1.

Cummings et al (Figure 12) discloses display panel comprising: a substrate (54); at least one protrusion (56) on a face of the substrate (54); and a light reflective layer (70) deposited adjacent to the protrusion, wherein the protrusion amplifies light reflection intensity when light is reflect off the light reflective layer.

Regarding Claim 4.

Cummings et al (Figure 12) discloses a light shieldling layer (black matrix (58)) wherein the light reflective layer (70) is disposed on a surface of the light shileidng layer.

***Allowable Subject Matter***

**Claim 2,3,5** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 2.

Art Unit: 2871

The prior art does not disclose wherein the light reflective layer comprises programmable code information and the protrusion amplifies the light reflection intensity such that the programmable code information is optimally detected.

Claim 3 is dependent on Claim 2 therefore is allowable.

Regarding claim 5,

The prior art does not disclose a light reflective layer deposited adjacent to the protrusion, wherein the protrusion amplifies light reflection intensity when light is reflected off the light reflective layer with a the light reflective layer disposed on the surface of the light shielding layer wherein the plurality of color filters are disposed between the light shielding layer and between the light reflective layer.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien  
Examiner  
Art Unit 2871

  
ANDREW SCHECHTER  
PRIMARY EXAMINER